

CLAIMS

1. A differential amplifier arrangement (53), comprising
  - an input stage (1) comprising a first differential amplifier (3, 4), with an offset compensation stage (10) which comprises at least one controllable current source (39) and which is connected to a bias input of the first differential amplifier (3, 4), and
  - an output stage (2) comprising a second differential amplifier (33), with said output stage being arranged downstream of said input stage (1).
- 15 2. The differential amplifier arrangement according to claim 1,  
characterised in that a programmable resistor network (7) is provided which is arranged in a feedback branch (5) of the first differential amplifier (3, 4) for controlling the amplification of the input stage (1).
- 20 3. The differential amplifier arrangement according to claim 2,  
characterised in that the programmable resistor network (7) comprises a series connection of several resistors (15, 16, 17, 18, 19, 20, 21, 22) with tappings being provided between the resistors (15, 16, 17, 18, 19, 20, 21, 22), such that depending on the desired amplification, a programmable resistor value can be switched in the feedback branch (5) of the first differential amplifier (3, 4).
- 25 30 35 4. The differential amplifier arrangement according to any one of claims 1 to 3,  
characterised in that

the first differential amplifier comprises a first operational amplifier (3) and a second operational amplifier (4), wherein non-inverting inputs form a symmetric signal input (IN+, IN-) of the differential amplifier arrangement (53) and wherein the output is connected to the respective inverting input in one feedback branch (5, 6) each.

5 5. The differential amplifier arrangement according to  
10 claim 4,

characterised in that  
in each instance the bias input of the first differential amplifier is formed at the inverting input of the first operational amplifier (3), and at  
15 the inverting input of the second operational amplifier (4).

6. The differential amplifier arrangement according to  
20 claim 5,

characterised in that  
the offset compensation stage (10') comprises a bridge circuit with a total of four programmable current sources (39, 40, 41, 42), in which bridge circuit a respective tapping node (K1, K2) of the bridge circuit, is connected to a respective bias input each, of the first operational amplifier (3) and of the second operational amplifier (4).

25 7. The differential amplifier arrangement according to  
30 claim 6,

characterised in that  
each of the four programmable current sources (39, 40, 41, 42) is coupled to the bias inputs of the first and the second operational amplifier (3, 4) so as to be able to be switched on and off irrespective of each other.

8. The differential amplifier arrangement according to any one of claims 1 to 7,  
5 characterised in that the second differential amplifier (51) comprises a negative feedback with a programmable resistor (49, 50) such that the output stage (2') comprises programmable amplification.